

#5/B  
8-28-02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application	)	<u>PATENT</u>
	)	
Inventor(s): Beatty, et al.	)	<u>APPLICATION</u>
	)	
Serial No.: Unknown	)	Examiner: S. Ahmed
	)	
Filed: Herewith	)	Art Unit: 1746
	)	
Title: Method of Manufacturing a	)	
Fluid Ejection Device with a	)	
Fluid Channel Therethrough	)	
	)	

CERTIFICATE OF MAILING UNDER 37 C.F.R. Section 1.8  
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner of Patent and Trademarks, Washington, DC 20231 on 1-28-02.

Steven J. Adamson, Reg. No. 32,776 1-28-02  
Signature Date

PRELIMINARY AMENDMENT

Commissioner of Patents and Trademarks  
Washington, DC 20231

Sir or Madam:

Please enter these amendments prior to examination of the above-identified case.

In the Claims:

Please ~~cancel~~ claim 1.

Please add the following new claims:

*Refile  
1/26  
Renumber  
Claims*

2 (new). A method of manufacturing a fluid ejection device comprising:

coupling a first surface of a substrate and an opposite second surface of the substrate with an outer edge surface, wherein the outer edge surface has an interface;

fluidically coupling a first fluid channel of the substrate with the interface;

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forming a thin film structure over the first surface of the substrate, the thin film structure including a heating element and an orifice layer that defines a firing chamber disposed over the heating element;

forming a second fluid channel through the thin film structure; and

fluidically coupling the first fluid channel with the firing chamber via the second fluid channel;

wherein the first fluid channel substantially extends from the interface to the second fluid channel, and is substantially located between the thin film structure and a recessed surface of the substrate.

8. (new). The method of claim 7 wherein the first fluid channel includes a refill channel.

9. (new). A method of manufacturing a print cartridge comprising: forming a thin film structure over an outer surface of a substrate, wherein the substrate has an interface between a fluid reservoir of the print cartridge and the substrate, wherein the thin film structure has a heating element and an orifice layer that defines a firing chamber disposed over the heating element;

fluidically coupling a first fluid channel of the substrate with the fluid reservoir;

disposing a second fluid channel through the thin film structure; and

fluidically coupling the first fluid channel with the firing chamber via the second fluid channel, wherein the first fluid channel substantially extends from the interface to the second fluid channel, and is substantially located between the thin film structure and a recessed surface of the substrate.

10. (new). The method of claim 9 wherein the first fluid channel includes a refill channel.

11. (new). A method of manufacturing a print cartridge comprising:

forming a thin film structure over a first outer surface of a substrate, wherein the substrate has an interface between a fluid reservoir of the print cartridge and the substrate, wherein the thin film structure has a heating element and an orifice layer that defines a firing chamber disposed over the heating element;

fluidically coupling a first fluid channel of the substrate with the fluid reservoir via a second outer surface of the substrate that is arranged in a non-parallel manner with said first outer surface;

disposing a second fluid channel through the thin film structure; and

fluidically coupling the first fluid channel with the firing chamber via the second fluid channel, wherein the first fluid channel substantially extends from the interface to the second fluid channel, and is substantially located between the thin film structure and recessed surface of the substrate.

<sup>12</sup>  
X (new). The method of claim <sup>11</sup> wherein the first fluid channel includes a refill channel.

REMARKS

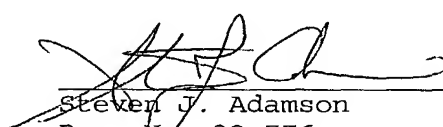
Applicant requests entry of the above amendments prior to examination. Claim 1 is cancelled and claims 2-7 are added by this amendment.

Applicant respectfully submits that Claims 2-7 are in condition for allowance and early notification of same is respectfully requested. Should the Examiner believe that a telephone conference would help further prosecution of this case, the Examiner is requested to contact the undersigned at the listed number.

The Commissioner is hereby authorized to charge underpayment of any fees (including any filing fees under 37 C.F.R. \$1.16 for additional claims and any patent application processing fees under 37 C.F.R. \$1.17 including any fee for extension of time) associated with this communication or credit any overpayment to Deposit Account No. 08-2025 in the name of the Assignee. A duplicate copy of this authorization is enclosed.

Respectfully Submitted  
on behalf of Applicant,

Date: 1 - 28 - 02

  
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